

In the Claims:

1. (Currently Amended) A wire bonder for wiring semiconductor chips, comprising
 - a bondhead,
 - a power module configured for supplying electrical power for operating a drive of the bondhead,
 - a power switch configured for controlling the supply of electrical power by the power module to the drive,
 - a timer,
 - a control program, and
 - at least one emergency switch,the at least one emergency switch being configured for producing upon activation a signal for causing the control program to complete a current bond cycle and then suspend the further wiring wherein the bondhead may be accelerated and decelerated one or more times until the current bond cycle is completed and for starting the timer, the timer being configured for opening the power switch after a predetermined period of time has elapsed, the predetermined period being sufficient to complete the current bond cycle.
2. (Previously Presented) The wire bonder according to claim 1, further comprising
 - an electrical power supply module guaranteeing on interruption of an external power supply the supply of electrical power to the wire bonder for a minimum predetermined period of time, and

a sensor for detecting a possible interruption of the external power supply, the control program completing the current bond cycle and then suspending the further wiring when the sensor reports an interruption of the external power supply.

3. (Previously Presented) The wire bonder according to claim 2, wherein the wire bonder is set up to instantaneously switch off all electrical consumers not required for completion of the current bond cycle when the sensor reports an interruption of the external power supply.

4. (Previously Presented) The wire bonder according to claim 1, further comprising a pressure sensor for measuring a pressure in a pressure supply line connected to the wire bonder, the control program completing the current bond cycle and then suspending the further wiring when the pressure measured by the pressure sensor falls below a predetermined value.

5. (Previously Presented) The wire bonder according to claim 2, further comprising a pressure sensor for measuring a pressure in a pressure supply line connected to the wire bonder, the control program completing the current bond cycle and then suspending the further wiring when the pressure measured by the pressure sensor falls below a predetermined value.

6. (Previously Presented) The wire bonder according to claim 3, further comprising a pressure sensor for measuring a pressure in a pressure supply line connected to the wire bonder, the control program completing the current bond

cycle and then suspending the further wiring when the pressure measured by the pressure sensor falls below a predetermined value.

7. (Previously Presented) The wire bonder according to claim 1, further comprising at least one vacuum sensor for monitoring a vacuum and a vacuum tank guaranteeing the supply of vacuum to the wire bonder for a minimum predetermined period of time on an interruption of an external vacuum supply, the control program completing the current bond cycle and then suspending the further wiring when the vacuum measured by the vacuum sensor falls below a predetermined value.

8. (Previously Presented) The wire bonder according to claim 2, further comprising at least one vacuum sensor for monitoring a vacuum and a vacuum tank guaranteeing the supply of vacuum to the wire bonder for a minimum predetermined period of time on an interruption of an external vacuum supply, the control program completing the current bond cycle and then suspending the further wiring when the vacuum measured by the vacuum sensor falls below a predetermined value.

9. (Previously Presented) The wire bonder according to claim 3, further comprising at least one vacuum sensor for monitoring a vacuum and a vacuum tank guaranteeing the supply of vacuum to the wire bonder for a minimum predetermined period of time on an interruption of an external vacuum supply, the control program completing the current bond cycle and then suspending the

further wiring when the vacuum measured by the vacuum sensor falls below a predetermined value.

10. (Previously Presented) The wire bonder according to claim 4, further comprising at least one vacuum sensor for monitoring a vacuum and a vacuum tank guaranteeing the supply of vacuum to the wire bonder for a minimum predetermined period of time on an interruption of an external vacuum supply, the control program completing the current bond cycle and then suspending the further wiring when the vacuum measured by the vacuum sensor falls below a predetermined value.

11. (Previously Presented) The wire bonder according to claim 5, further comprising at least one vacuum sensor for monitoring a vacuum and a vacuum tank guaranteeing the supply of vacuum to the wire bonder for a minimum predetermined period of time on an interruption of an external vacuum supply, the control program completing the current bond cycle and then suspending the further wiring when the vacuum measured by the vacuum sensor falls below a predetermined value.

12. (Previously Presented) The wire bonder according to claim 6, further comprising at least one vacuum sensor for monitoring a vacuum and a vacuum tank guaranteeing the supply of vacuum to the wire bonder for a minimum predetermined period of time on an interruption of an external vacuum supply, the control program completing the current bond cycle and then suspending the

further wiring when the vacuum measured by the vacuum sensor falls below a predetermined value.

13. (Previously Presented) The wire bonder according to claim 1, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

14. (Previously Presented) The wire bonder according to claim 2, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

15. (Previously Presented) The wire bonder according to claim 3, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

16. (Previously Presented) The wire bonder according to claim 4, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

17. (Previously Presented) The wire bonder according to claim 5, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

18. (Previously Presented) The wire bonder according to claim 6, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

19. (Previously Presented) The wire bonder according to claim 7, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

20. (Previously Presented) The wire bonder according to claim 8, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

21. (Previously Presented) The wire bonder according to claim 9, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

22. (Previously Presented) The wire bonder according to claim 10, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

23. (Previously Presented) The wire bonder according to claim 11, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.

24. (Previously Presented) The wire bonder according to claim 12, further comprising a light curtain for detecting any access to a working area of the bondhead, the control program completing the current bond cycle and then suspending the further wiring when the light curtain reports an interruption.